

Docket No.: 42390.P2319R

#22
2002
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES

RECEIVED

In re the application of:

Maricetty

Serial No.: 09/224,620

Reissue of US Patent 5,590,342

Filed: 12/31/98

For: Method and Apparatus for Reducing Power
Consumption in a Computer System Using
Virtual Device Drivers

DEC 06 2002

Technology Center 2100

Examiner: Auve, G.

Art Unit: 2781

APPELLANT'S BRIEF UNDER 37 CFR § 1.192
IN SUPPORT OF APPELLANT'S APPEAL TO THE BOARD OF PATENT
APPEALS AND INTERFERENCES

Hon. Commissioner of
Patent & Trademarks
Washington, D.C. 20231

Dear Sir:

Appellant hereby submits this Brief in triplicate in support of an appeal from a final decision of the Examiner, in the above-referenced case. Appellant respectfully requests consideration of this appeal by the board of Patent Appeals and Interference for allowance of the above-referenced patent application.

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I. Real Party in Interest

The real party in interest in the present appeal is Intel Corporation of Santa Clara, California, the assignee of the present application.

II. Related Appeals and Interferences

There are no related appeals or interferences to appellant's knowledge that would have a bearing on any decision of the Board of Patent Appeals and Interferences.

III. Status of the Claims

Claims 1-35 and 51-94 stand rejected under 35 USC § 251 and 37 CFR § 1.175 as being based on a defective reissue declaration. Applicant has submitted herewith a new (presently unsigned) reissue declaration that remedies the alleged defects. A signed version will follow shortly.

Claims 51-94 stand rejected under 35 USC § 251.

IV. Status of Amendments

The present reissue application for reissue of US Patent 5,590,342 (the '342 patent) was filed on 12/31/98, within the two year period of the issue date of the '342 patent, 12/31/96.

On 12/31/98, applicant filed with the reissue application a preliminary amendment adding claims 36 – 50 and indicated applicant's intent to broaden the claims of the reissue application.

On 5/27/99, applicant filed a preliminary amendment canceling claims 36 – 50 and adding claims 51 – 94. This amendment was entered.

On 8/13/99, an Office Action was mailed examining reissue claims 1-50. Applicant notified the Examiner that a preliminary amendment had been filed prior to the mailing date of the 8/13/99 Office Action. The Examiner therefore issued another Office Action on 12/17/99, which superceded the Office Action of 8/13/99. Among other things, the Examiner rejected the reissue claims based on the allegedly defective declaration and under the recapture doctrine.

On 3/8/2000¹, applicant responded to the Office Action of 12/17/99 and remedied various cited deficiencies, and argued that applicant's claims overcome the recapture concerns expressed by the Examiner.

On 1/02/01, a Final Office Action was mailed. The Examiner only rejected claims 51-94 based on the recapture doctrine.

On 4/2/01, applicant filed an amendment which made some claim changes and

which argued extensively against the recapture rejection. These claim amendments were not entered because of objections to their form.

On 5/23/01, an Office Action was mailed. This Office Action indicated that the Examiner had been persuaded by applicant's recapture arguments, and therefore prosecution on the merits of the case were closed. However, the Office Action required applicant to remedy improper claim amendment format, and provide the original patent or a declaration that the original patent was lost.

On 7/17/01, applicant submitted a supplemental amendment to properly provide the previously proposed claim amendments and to indicate that the original patent was lost. Additionally, an information disclosure statement was submitted along with an affidavit to swear behind the newly submitted reference. These claim amendments were entered. Thus, all proposed claim amendments were entered.

On 10/09/01, a new Office Action was issued, reopening prosecution in view of the recently decided Federal Circuit case Pannu v. Storz Instruments, 258 F.3d 1366, 1371 (Fed. Cir. 2001). This Office Action also rejected the claims based on an allegedly defective oath or declaration.

On 2/8/02, applicant submitted a response arguing that Pannu did not alter the outcome in this case, and that applicant's claims are not impermissible recapture.

On 4/02/02, a Final Office Action was mailed, rejection applicant's contentions regarding recapture.

Appellant filed a Notice of Appeal on 10/02/02, and the present appeal ensued.

¹ Our records indicate this paper was filed 3/8/00, although the Examiner's Office Action indicates that it is

V. Summary of the Invention

Appellant's disclosure describes a system, method, apparatus, and computer program product related to power management of multiple and/or configurable devices. In one embodiment, the invention overcomes the shortcomings of prior art dedicated device driver software power management solutions as well as operating-system-transparent microcontroller-based solutions by utilizing a software solution with appropriate capabilities to accommodate devices with variable configurations. Operation-system-transparent hardware-based solutions of the prior art simply lacked the ability to adapt to and be informed of changes in configurations of devices in a manner allowing power management of those devices to effectively continue. Additionally, typical dedicated prior art device drivers were just that, dedicated. Such dedicated device drivers did not power manage multiple devices, much less multiple configurable devices.

responsive to a paper filed 3/14/00.

VI. Issues

1. Does the recapture doctrine bar any broadening of a claim beyond a limitation that was added to overcome a prior art rejection, meaning that the reissue claim may not exclude the precise limitation that was added to overcome prior art in the original patent?

2. Did, applicant “surrender” any and all subject matter that lacks the “virtual device driver” limitation?

3 - 13. Does the recapture doctrine bar the claims of Groups I - XI?

14. Is the Judicially Created Recapture Doctrine inherently and irreconcilably inconsistent with the Reissue Statute, 35 USC § 251, which permits broadening of claims, and now devoid of its original purpose of ensuring comity to the prosecution-history-reading public?

VII. Grouping of Claims (Independent Claims **Bolded**)

For the purposes of this appeal only, the claims stand or fall according to the following groupings. The claims in each group stand or fall together for the purposes of this appeal.

Group	Claims
I	51, 57, 86 , 87, 89
II	52, 53, 54, 61
III	58, 88, 90, 91
IV	63
V	56, 64 , 65, 66, 67, 68, 80 , 81, 82, 83, 94
VI	55, 59, 60, 85
VII	69, 84
VIII	70 , 71, 72, 79
IX	74 , 75, 76, 77, 78
X	92, 93
XI	73

VIII. Argument

Recapture analysis under current law is a multiple part analysis. As a threshold issue, it appears that the Examiner is taking the position that a limitation added in prosecution to overcome a reference simply must appear in all reissue claims. Although the applicable precedent may be somewhat confusing, this is wrong as appellant shows immediately below. Next, because an **admission** that subject matter is not patentable, may not constitute the “error” contemplated under the reissue statute, appellant shows that indeed appellant did not admit that appellant is not entitled to claims unless they recited the words “virtual device driver”. The record contains no such admission. Since the traditional recapture doctrine bars obtaining claims of the **same** scope as those canceled to obtain allowance of the original patent, appellant shows why the present reissue claims are not of the same scope, but rather are each narrower in at least one material respect than the claim surrendered in obtaining the ‘342 Patent.

Finally, appellant argues that the recapture doctrine itself is flawed. The doctrine designed to provide the public with safe harbors of operation is now so muddled that the public cannot possibly rely on recapture with any degree of certainty. The only limitations on a broadening reissue should be the prior art, the two year statute of limitations imposed by 35 USC § 251, and the requirement that the error be an error without deceptive intent.

1. Does the recapture doctrine bar any broadening of a claim beyond a limitation that was added to overcome a prior art rejection, meaning that the reissue claim may not

exclude the precise limitation that was added to overcome prior art in the original patent?

A. Narrowing Amendment not an Absolute Bar to Removing/Altering Limitation

Although originally not codified in statute, the ability to broaden a patent through reissue is a cornerstone of US patent system. The Supreme Court first spoke on the issue by striking down an attempt to enforce a broadened reissue claim in Miller v. Brass, 104 US 350 (1881). Although the Court struck down the reissue due to the unreasonable delay of 15 years in filing the reissue, Justice Bradley noted that “under general terms of law, such a reissue may be made where it clearly appears that an actual mistake has inadvertently been made.” Miller, 104 US 350, 355.

In contrast, Topliff v. Topliff, 145 US 156 (1892), held a lapse of less than two years ordinarily will not be evidence of an abandonment by the patentee so as to bar him from obtaining a broadening reissue. Topliff, 145 US 156, 170. As in Miller, Justice Bradley reaffirmed the notion that when a patent is inoperative due to the claims being narrower than the actual invention of the patentee, and the error has arisen inadvertently or by mistake without fraud or deception, the patentee may seek a broadening reissued patent if he is diligent in discovering the mistake. The ability to file for such a broadening reissue within two years of the date of patent issuance was later codified in 35 USC § 64 in 1946 and then in 35 USC § 251 in its present form in 1952.

The reissue statute is grounded in the principle, articulated by Chief Justice Marshall, in Grant v. Raymond, 31 U.S. (6 Pet.) 218, 244 (1832), that a defective patent is an inadequate exchange for the patentee's disclosure of an invention and that a new patent should be issued, in appropriate circumstances, which secures to the patentee the

benefits which the law intended. Hewlett-Packard Co. v. Bausch & Lomb, Inc., 882 F.2d 1556, 1565 (Fed. Cir. 1989). "The reissue statute balances the purpose of providing the patentee with an opportunity to correct errors of inadequate claim scope against the public interest in finality and certainty of patent rights." In re Graff, 111 F.3d 874, 877 (Fed. Cir. 1997). The statute is remedial in nature, based on fundamental principles of equity and fairness and, therefore, to be construed liberally.

The "recapture" doctrine, on the other hand, was never codified. The recapture doctrine is directly at odds with the broadening reissue statute because recapture limits the ability of an applicant to seek broadened claims. The recapture doctrine, in effect, limits the ability to remedy errors, and therefore should be at least narrowly construed if not abandoned altogether. Arguably, the recapture doctrine simply defines "error" as used in the statute; however, in any case, it is clear that recapture limits the ability, explicitly provided by Congress in 35 USC § 251, to obtain broader claims in a reissue patent. Again, a narrow construction of any such doctrine is appropriate since recapture operates directly against the statute itself.

The recapture doctrine grew out of the Supreme Court's decision in Leggett v. Avery, 101 US 256 (1879). Once again, Justice Bradley, speaking for the majority invalidated a reissue patent that sought to claim matter explicitly surrendered to obtain the original patent. Specifically, the patentee in Leggett canceled a number of claims at the request of the examiner in order to obtain a patent extension. Later, the patentee re-applied for a term extension. Because the claims were abandoned in order to secure the reissue extension, the Court held that the patentee was estopped from subsequently reclaiming them.

Leggett became the basis of what is now considered the recapture doctrine. Various cases discuss principles of estoppel, and others rely on the meaning of “error” in the modern reissue statute as bases for preventing recapture. Although the Federal Circuit evinces a tightening grip on claim scope, none of the cases go so far as the Examiner in this case now insists. Such an extension of the recapture doctrine is contrary to the modern precedent, historical development, not to mention the reissue statute itself.

After the 1952 Patent Act, numerous cases re-examined the notion of “error” due to the fact that the new statute eliminated the terms “inadvertence, accident, or mistake” from the error requirement. Under the ’52 Act, the only requirement on “error” is that the error occur “without deceptive intent”. Although there was some disagreement,² the cases generally reasoned that there was no practical effect to the change, and the jurisprudence generally previously applied in determining error remained valid precedent. The modern cases also clearly demonstrate that recapture is a slight conscription on what may be claimed in a reissue patent.

For example, In re Byers, 230 F.2d 451 (CCPA 1956) stands for the proposition that the same claims or claims broader in all respects than those originally canceled cannot be obtained by reissue. The Court in Byers couched its analysis mostly in terms of whether or not the applicant committed an “error” correctable under the reissue statute. The Court reasoned that the reissue claims were **only** broader and not **in any manner** narrower.

A comparison of the claims makes it clear that appealed claims 2 and 3 are drawn to the same invention as was original claim 20 of appellant's original application, and that they are broader in certain respects and **not narrower in any respect** than that claim. Byers, 230 F.2d 451, 455 (emphasis added).

² See, e.g., concurring opinion in In re Wadlinger, 496 F.2d 1200, 1209-11.

The Court emphasized the historical development of the doctrine

It is well settled that the deliberate withdrawal or amendment of a claim in order to obtain a patent does not involve inadvertence, accident or mistake and is not an error of the kind which will justify a reissue of the patent including the matter withdrawn. Thus in Dobson v. Lees, 137 U.S. 258, the Supreme Court of the United States said:

A reissue is an amendment, and cannot be allowed unless the imperfections in the original patent arose without fraud, and from inadvertence, accident or mistake. * * * Hence the reissue cannot be permitted to enlarge the claims of the original patent by including matter once intentionally omitted. Acquiescence in the rejection of a claim; its withdrawal by amendment, either to save the application or to escape an interference; the acceptance of a patent containing limitations imposed by the Patent Office, which narrow the scope of the invention as at first described and claimed; are instances of such omission.

Similarly in Shepard v. Corrigan, 116 U.S. 593, the Court said:

Where an applicant for a patent to cover a new combination is compelled by the rejection of his application by the Patent Office to narrow his claim by the introduction of a new element, he cannot after the issue of the patent broaden his claim by dropping the element which he was compelled to include in order to secure his patent.

The rule set forth in those cases has been repeatedly applied by this court. In re Murray, Jr., 20 C.C.P.A. (Patents) 1046, 64 F.2d 788, 17 U.S.Pat.Q. 365; In re Guastavino, 23 C.C.P.A. (Patents) 1179, 83 F.2d 913, 29 USPQ 532; In re Crowell, 23 C.C.P.A. (Patents) 725, 79 F.2d 746, 27 USPQ 349; In re French, 24 C.C.P.A. (Patents) 1218, 90 F.2d 113, 33 USPQ 537; In re Stanton, 86 F. 2d 337, 24 C.C.P.A. (Patents) 708, 31 USPQ 336; In re Lane, 32 C.C.P.A. (Patents) 817, 146 F.2d 306, 64 USPQ 231. Byers, 230 F.2d 451, 455-6.

The Court made it clear that simply "dropping" such an added element in a reissue, without more, was impermissible. This proscription **only** applies to claims of the same scope or of broader scope in all regards.

It is evident that since the deliberate cancellation of a claim in order to obtain a patent constitutes a bar to the obtaining of **the same claim** by reissue, it necessarily also constitutes a bar to the obtaining of a claim which differs from that canceled **only in being broader**. That was the holding in In re White, 23 F.2d 776, 57 App.D.C. 355, and in In re Murray, supra, this court quoted with approval the following statement from Ex parte White 1928 C.D. 6:

The deliberate withdrawal of a claim in order to secure a patent is conclusive of the presumption that there has been no inadvertence, accident, or mistake, and the invention thus abandoned cannot be regained either by construing the claims of the patent broadly or by obtaining a reissue with broadened claims. The rule is the same whether the claims sought by reissue or otherwise are **identical, substantially the same, or broader than** the abandoned claims.

Byers, 230 F.2d 451, 455 (emphasis added).

Thus, Byers only addressed the cases of broadened-in-all-respects claims and claims of the same scope as those previously canceled. Subsequently, in In re Wesseler, 367 F.2d 838, the Board took exactly the same position that the Examiner in this case is now taking, and lost. Wesseler dealt with a claim which was amended to specify additional detail about a mounting means (an "offset ear") for a cable or pipe hanger. The Board took the position that the Examiner in that case had effectively stated that the claim would not be allowable without the "offset ear" mounting means limitation.³ Wesseler, 367 F.2d 838, 844. The Court disagreed and stated that under the facts of the prosecution history no admission on the part of the applicant or affirmative statement on the part of the Examiner established that the claims could only be patented with this limitation. Wesseler, 367 F.2d 838, 850.

The Board acknowledged that the reissue claims were not of the same scope as the surrendered claims. Wesseler, 367 F.2d 838, 844 ("Nowhere have we held that any of the claims that we have rejected on the ground of lack of error are of the same scope as claims cancelled during prosecution in the original application. This was not our ground of rejection, and we recognize that all of the claims before us contain terms of recitation that are added limitations not present in the cancelled claims"). The Board nonetheless took the position that once a limitation was added, it could not be removed. The Court soundly rejected these arguments

Furthermore, the Court clarified that in Shepard v. Carrigan, it was the prior art

³ In the present reissue application, the Examiner does not even take as strong of a position as in Wesseler. In Wesseler, the Examiner at least argued that the prosecution history amounted to a statement that the claims would not be patentable without the mounting means limitation. Here, it is clear that the record makes no such affirmative statement that the virtual device driver limitation is necessary. Without such statement, it simply is not recapture to reissue a claim with a *different* scope that omits the virtual device driver limitation.

which prevented the applicant from obtaining broader claims without certain limitations. Wesseler, 367 F.2d 838, 849. The Court also distinguished Miller v. Brass as involving the applicant trying to again claim "the very thing which the patentee professed to avoid and dispense with" (i.e., there was a clear disclaimer of that subject matter). Wesseler, 367 F.2d 838, 849-50.

Even more on point is In re Petrow, 402 F.2d 485 (CCPA 1968). In Petrow, the Court reasoned that there were insufficient facts in the record to hold that appellants' cancellation was an admission that their new claim was not patentable at the time the earlier claim was canceled. Thus, appellants were not estopped from obtaining the new claim of different scope through reissue if that claim **differed immaterially** from the surrendered claims. The Court pointed out that the inquiry is governed by the facts of each case.

We think it well to state at the outset that we are guided herein by the language in In re Willingham, 48 CCPA 727, 282 F.2d 353, 127 USPQ 211, where this court observed:

The deliberate cancellation of a claim of an original application in order to secure a patent cannot ordinarily be said to be an "error" and will in most cases prevent the applicant from obtaining the cancelled claim by reissue. **The extent to which it may also prevent him from obtaining other claims differing in form or substance from that cancelled necessarily depends upon the facts in each case and particularly on the reasons for the cancellation.**

Petrow, 402 F.2d 485, 487 (emphasis added).

Thus, Petrow made it quite clear that as long as a claim differs immaterially from a canceled claim, it is not barred merely by omitting some limitation added in prosecution.

Additionally, In re Richman, 409 F.2d 269 (CCPA 1969), further brings home this point. Again, the board argued that there was precedent for the proposition that once a limitation is added, it cannot be broadened or removed. This position was flatly rejected.

In fact, the Court indicated that the inquiry was completely wrong. There is in fact no reason to question whether a claim contains a particular limitation. The necessary inquiry is whether the claim is of the **same** scope. The Court stated:

In support of his position, the solicitor points out that this court, in In re Wesseler (supra, footnote 3), stated that Shepard v. Carrigan, 116 U.S. 593 (1886), "may be support for the rule that one who deliberately adds a limitation to avoid the prior art cannot omit that limitation in reissue claims so as to encroach upon the prior art * * *." Referring back to Shepard, however, it is apparent that the situation there was one in which the omission of the added limitation would have resulted in the claim being drawn to the same subject matter as the original rejected claim, to which the limitation was added, thus making it unpatentable over the prior art for the same reason as the original claim. **We therefore find neither decision to be authority for the proposition that a limitation added to a claim in obtaining its allowance cannot be broadened, under present statutory law, by reissue if the limitation turns out to be more restrictive than the prior art required.** Certainly one might err without deceptive intention in adding a particular limitation where a less specific limitation regarding the same feature, or an added limitation relative to another element, would have been sufficient to render the claims patentable over the prior art. Richman, 409 F.2d 269, 275 (emphasis added).

The Court made very clear that the scope of estoppel is very limited, and indeed only estops the recapture of subject matter of the same scope as the canceled claims. The Court also clearly indicated that it was possible to err without deceptive intent by narrowing claims too much.

It is thus apparent that each of the appealed claims is **more restrictive in at least one significant respect** than the cancelled claims and that **appellant is not seeking**, through the presentation of claims 23-28, **to recapture the same subject matter that he sought in cancelled claims 1-15.** We find no basis for estoppel. Neither do we find any evidence that appellant intended to settle for less protection than he was entitled to or to omit or abandon the subject matter he seeks here. We do find, as in Wesseler, that "while appellant acted 'deliberately', he did so in error." The error, so far as the facts of record are concerned, can only be regarded as "error without any deceptive intention" within the terms of 35 USC 251. Richman, 409 F.2d 269 at 276 (footnote omitted) (emphasis added).

Thus the law is and remains that as long as the reissue claims are narrower in at least one "significant" or "material" respect, and as long as no intent to surrender such claims is shown by the prosecution history, the recapture doctrine does not bar such claims. Richman was cited approvingly in the more recent CCPA and Federal Circuit cases on this issue. See, e.g., In re Clement, 131 F.3d 1464, 1468 (Fed. Cir. 1997); Ball

Corp. v. United States, 729 F.2d 1429, 1436 (Fed. Cir. 1984); In re Wadlinger, 496 F.2d 1200, 1208 (C.C.P.A. 1974). In fact Wadlinger concisely addressed the point by stating “[t]his court, in its decisions both before and after Wesseler, has made it clear that a reissue applicant is, **at most**, prevented by interpretations of the language of § 251, and its predecessor statute R.S. 4916, from obtaining claims which are of the same scope as the claims previously cancelled in the original application.” Wadlinger, 496 F.2d 1200, 1207 (emphasis added).

The more recent cases of discuss ways to determine if recapture has occurred, but again the standard is whether a material limitation beyond the canceled claim has been added.⁴ For example, Ball Corp. v. United States, 729 F.2d 1429 (Fed. Cir. 1984), illustrates that a limitation added in prosecution of a patent may be removed through reissue. In Ball, although the patentee amended a “feed means” limitation to include a specific limitation, the Federal Circuit upheld claims that modified and broadened the exact element added. To obtain allowance of the original patent, the patentee added “a plurality of feedlines”. In a disputed reissue claim, the patentee removed a “substantially cylindrical conductor” limitation and broadened the “plurality of feedlines” limitation to “at least one conductive lead”. This term is broader than the added “plurality of feedlines” in two regards. First, the term “at least one conductive lead” encompasses one conductive lead, whereas “a plurality of feedlines” requires two or more items. Secondly, the claim is broader because the term “conductive lead” is substituted for “feedline”. The claim escaped the recapture doctrine as being narrower, on balance, with respect to the feed means aspect. Thus, under Ball, even though a term added in prosecution was not

used verbatim in the reissue claims, and even though the term was broadened, the claim was upheld.

In Mentor Corp. V. Coloplast, Inc., 998 F.2d 992 (Fed. Cir. 1993), the Federal Circuit again indicated that a claim *might* escape the recapture doctrine even though it eliminated limitations added during prosecution. The reissue claim at issue in Mentor eliminated a limitation that an adhesive be transferred from an outer to an inner layer, and therefore was broader in terms of the very aspect that was narrowed to obtain allowance of the original patent. Again, the court entertained arguments that the claim may escape recapture if it included other materially narrowing limitations. However, the court held that the limitations that were added were insufficient. The court held that the added “flexible” and “single roll” limitations were not materially narrowing limitations. Thus, the claim did not escape the recapture prohibition:

The limitation in claim 6 that the catheter material be “flexible” did not materially narrow the claims, which already recited that the material be “resilient.” Likewise, the limitation that the catheter be rolled outward to form a “single” roll did not materially limit the claims; the catheter can only be rolled and applied from a single end to form a single roll when the other end is connected to a urine collection means. Further, the addition of the words “thereon,” referring to the location of the adhesive release layer on the outer surface prior to unrolling, and “only,” referring to the adhering of the adhesive to the inner surface after unrolling, did not materially narrow the claims.

Mentor, 998 F.2d 992, 996.

Thus, the Mentor Court found “flexible” to not be a material limitation of a catheter that is already claimed to be “resilient” since a resilient catheter is also inherently somewhat flexible. Additionally, the Court did not find the “single” limitation to be materially limiting as it was inherently required by the remainder of the claim. Additionally, the use of “thereon” and “only” were simply deemed to not materially limit the claims. Thus, the Mentor decision indicates that already-inherently-required

⁴ Appellant addresses the issue of whether the claim of different scope was also surrendered through the

limitations are not materially limiting. As detailed below, applicant has added truly limiting additional limitations to applicant's reissue claims.

Similarly, in Hester, the Federal Circuit again took the position that a claim might escape recapture despite covering some subject matter which was previously deemed surrendered. In Hester, the court concluded that Williams had surrendered, by argument, subject matter lacking the "solely with steam" and "two sources of steam" limitations. Yet, the court acknowledged that the recapture doctrine may be avoided even though surrendered subject matter had crept back into the reissue claims. Hester, 142 F.3d 1472, 1482 ("Finally, because the recapture rule may be avoided in some circumstances, we consider whether the reissue claims were materially narrowed in other respects. See, e.g., Mentor, 998 F.2d at 996, 27 U.S.P.Q.2D (BNA) at 1525 ("Reissue claims that are broader in certain respects and narrower in others may avoid the effect of the recapture rule."); Clement, 131 F.3d at 1470, 45 U.S.P.Q.2D (BNA) at 1165.").

Again, however, in Hester, the Court was unconvinced that any material limitations had been added. In Hester, the term "high humidity steam" was determined to not qualify as a materially narrower term because it was actually broader than the limitation in the original claim than the term replaced. Hester, 142 F.3d 1472, 1483. Also, in Hester, the term "spiral conveyance path" was found to be not materially limiting because claim 1 already contained a corresponding element. Claim 1 contained a means plus function element, and the only corresponding structure passed the conveyor through a spiral path. Hester, 142 F.3d 1472, 1483. Therefore, this "limitation" was found to not be a limitation at all. Any difference was immaterial. Furthermore, Hester failed to

prosecution history below.

explain how the recitation of this element, which was present in prior art cookers cited by the Examiner during prosecution of the original patent, materially narrowed the claims.

Other courts have successfully applied this “materiality” standard to reissue claims. The District Court in Sonoco Prods. Co. v. Durabag Co., 1994 U.S. Dist. LEXIS 18443 (DC CD Cal 1994) ruled that claim differences were not sufficiently material to clear the recapture hurdle. A “tab means” that was added to the claim was deemed not sufficiently material because the “tab means” limitation was contained in several of the canceled claims of the original patent and because the Examiner deemed claims containing the tab means to be obvious. In other words, the tab means were deemed by the Examiner in the original case to be obvious in view of the prior art, and their addition was therefore immaterial.

On the other hand, in B.E. Meyers & Co. v. United States, 47 Fed. Cl. 200 (Fed. Cl. 2000), the Court found that a reissue application did not violate the recapture rule. The original application recited a pulsing circuit, which was narrowed to avoid the prior art. The reissue claims related to a lens apparatus that produced a beam with a well-defined peripheral edge. The Court found that the lens apparatus was in fact a separate invention eligible for patent protection, independent of whatever type of pulsing circuitry might be used in combination with the lens system in any particular device. In order to receive protection for this aspect of its invention, the applicant had to delete any reference to pulsing circuitry in the reissue claims. Of course, in doing so, the applicant deleted the specific pulsing diode and substantial pulsing current limitations that had been added to its original claim to distinguish the prior art. Thus, Meyers demonstrates that a different invention, absent the limitations added to obtain allowance of the patent, may be obtained

via reissue.

More recently, the Federal Circuit has once again condoned the material-narrowing-avoids-recapture approach in Pannu v. Storz Instruments, Inc., 258 F.3d 1366, 1371 (Fed. Cir. 2001) (“Finally, the court must determine whether the reissued claims were materially narrowed in other respects to avoid the recapture rule. Hester, 142 F.3d at 1482-83, 46 U.S.P.Q.2D (BNA) at 1649-50; Clement, 131 F.3d at 1470, 45 U.S.P.Q.2D (BNA) at 1165.”). In Pannu, the patentee added a limitation to the shape and positioning to the haptics during prosecution of the original patent. Specifically, the new claim stated that the haptics would contain "a continuous, substantially circular arc having a diameter greater than the diameter of said lens body." In the reissue patent, the Patent Examiner allowed the removal of this very limitation, but had the patentee include certain changes, including size limitations, where the snag resistant means would be at least three times greater than the flexible elements, and the supporting elements would be substantially coplaner with the haptics.

The Court in Pannu did not dismiss out of hand Pannu’s claims due to the lack of the “continuous, substantially circular arc” limitation. Rather, the Court continued on to determine whether the other added limitations were material. In this case, the Court did not find that the limitations were sufficient to avoid recapture, stating that the “reissued claims were not narrowed in any material respect compared with their broadening.” Pannu, 258 F.3d 1366, 1371. However, it is clear that an analysis of whether materially limiting new elements were added was performed to decide whether Pannu could

recapture some of the subject matter he gave up.⁵ Unfortunately, and incorrectly, the Examiner in this case seems to believe that no limitations will save a claim if it is missing something that was added in prosecution of the original application.⁶

In summary, it is abundantly clear that the mere addition of a limitation to a claim does not absolutely preclude that limitation from being removed via reissue. There is simply no requirement that applicant can not take out what was put in to obtain allowance, assuming that other material narrowing limitations are added. Similarly, argument cannot have such preclusive effect either. See, e.g., Hester, 142 F.3d 1472.

B. Appellant's Reissue Claims

Although appellant added the term "virtual" to claim 11, this addition does not bar removal of this term. Applicant did not admit that this term was required to overcome the prior art nor that it was the only way to overcome the prior art.

Claim 11 was amended as shown by the underlined portions below:

11. A computer system comprising:

⁵ Somewhat confusingly, Pannu also states "In prosecuting the '855 patent, Pannu specifically limited the shape of the haptics to a "continuous, substantially circular arc." On reissue, he is estopped from attempting to recapture the precise limitation he added to overcome prior art rejections." Pannu, 258 F.3d 1366, 1371. This quote, taken out of context may seem to indicate that a patentee cannot recapture any of what was surrendered in prosecution of the original patent. However, taken in context, this is only a statement that based on the facts of this case, Pannu is estopped from recapturing what he attempted to recapture. This is not a blanket statement that all patentees are estopped from recapturing anything they surrendered. Such a bold holding would clearly overrule numerous prior cases, including Ball, Mentor, and Hester, just to name a few. Any interpretation that assumes the Federal Circuit has overruled well established precedent *sub silentio* and by a panel decision is clearly erroneous. As further discussed below, additional criteria, such as whether a limitation is germane to a prior art rejection may be a useful tool for analysis of its materiality in some cases. These additional criteria are not required nor particularly instructive in other cases.

⁶ The Examiner appears to take precisely the opposite position as the case law, which allows some material narrowing to save a claim broadened to remove a limitation added in prosecution. On p. 7 of the Office Action of 4/2/02, the Examiner states:

As noted above, the Court in Pannu explicitly stated that on reissue applicant is estopped from attempting to recapture the precise limitation he added to overcome the prior art rejection. That is what applicant is attempting to do in this case.

a bus;
a central processing unit (CPU) coupled to the bus running an operating system and at least one power-unaware application, wherein the operating system has a virtual device driver performing device idle detection using one or more events timers indicating the activity level of at least one local device, and further wherein the virtual device driver places idle local devices in a reduced power consumption state when associated events timers indicate that no activity has occurred for a predetermined period of time transparent to said at least one power-unaware application.

In the first Office Action issued by the patent office, claims 12-15 were rejected under 35 USC § 112, second paragraph for improper antecedent basis. Claims 12-15 originally depended on claim 11 and originally contained the term “virtual device driver”, unlike the parent claim 11 which originally only contained the term “device driver”. Appellant amended claim 11 to include the “virtual device driver” limitation, thereby overcoming the rejection of claims 12-15 under 35 USC § 112, second paragraph.

Additionally, the Examiner suggested that the “virtual device driver” limitation justified the grant of a patent. Office Action mailed 1/26/96, p. 6 (“Independent claim 1 is similar to claim 11, except that it specifies the use of *virtual* device drivers to provide power control over devices, instead of using the normal devices drivers of claim 11. As virtual device drivers have no permanent tie to specific hardware, their use in controlling power to specific hardware is considered a novel departure from normal methods of power control.”) (emphasis in original).

Applicant did not disagree. Indeed, applicant continues to agree that this limitation justifies the patentability of such claims. Applicant re-iterated the Examiner’s observation with respect to claim 11 that the references Smith (US Patent 5,167,024), Stewart (US Patent 5,404,546), Kardach (US Patent 5,276,888), Mattox (US Patent 5,404,321) do not disclose the use of virtual device drivers. Response Dated 5/28/96, p. 6. Applicant noted that the same argument applied to claims 21-35 but did not amend

these claims and never responded to any art rejection of these claims.

At most, the record can be taken to indicate that Applicant agreed with the Examiner that the feature “virtual device driver” was one way to distinguish the prior art. An independent justification of appellant’s amendment is that it solved a § 112, second paragraph problem in three other claims. Appellant did not repeatedly harp on the virtual device driver as being critical or important to the invention, but rather merely agreed with the Examiner that the entire combination set forth in the claims was patentable. This was not an admission that there was nothing patentable in applicant’s disclosure except inventions including a virtual device driver. Such an interpretation would be a grave distortion of the record. To so directly contravene the remedial reissue statute’s explicit error-correcting provision, surely a greater showing is required to conclude that such an admission has been made.

Once again, it is worth emphasizing that applicant clearly is not attempting to claim precisely what was surrendered (original claim 11 without the “virtual” adjective describing “device driver”). Applicant did not previously present any of now-presented reissue claims. Nor did applicant deliberately withdraw or amend any of the now-presented reissue claims. Applicant is not merely trying to re-claim the use of “normal device drivers” to perform power management.

C. The Examiner’s Position

The Examiner appears to take the position that because a limitation was added in prosecution, this limitation cannot be removed or altered by a reissue. This is simply wrong.

The Examiner quotes a form paragraph from MPEP § 1412.02, stating:

Claims 51-94 are rejected under 35 USC § 251 as being an improper recapture of broadened claimed subject matter surrendered in the application for the patent upon which the present reissue is based. See *Hester Industries, Inc. v. Stein, Inc.*, 142 F.3d 1472, 46 USPQ2d 1641 (Fed. Cir. 1998); *In re Clement*, 131 F.3d 1464, 45 USPQ2d 1161 (Fed. Cir. 1997); *Ball Corp. v. United States*, 729 F.2d 1429, 1436, 221 USPQ 289, 295 (Fed. Cir. 1984). A broadening aspect is present in the reissue which was not present in the application for patent. The record of the application for the patent shows that the broadening aspect (in the reissue) relates to subject matter that applicant previously surrendered during the prosecution of the application. Accordingly, the narrow scope of the claims in the patent was not an error within the meaning of 35 USC § 251, and the broader scope surrendered in the application for the patent cannot be recaptured by the filing of the present reissue application.

To the extent that this form paragraph can be read to take the position that a reissue cannot remove or alter a limitation which is added during prosecution of a patent, it too is flatly wrong. Notably, the paragraph need not be read in this manner because this paragraph can be read to only preclude recapturing that which was surrendered. As previously discussed, the “surrendered” subject matter is typically the original claims.

The Examiner further argues that Pannu is dispositive in this case and stands for the proposition that once a limitation is added in prosecution of the original patent, that that particular limitation may under no circumstances be removed. This too is simply incorrect. The Examiner acknowledged applicant’s attempts to point out materially narrowed aspects of applicant’s claims:

Applicant has gone to great lengths to argue that even if the omission of the “virtual device driver” limitation makes the claims broader in an aspect germane to the prior art rejection that the newly added limitations at the same time make the claims narrower in an aspect germane to the prior art rejection, and that because of this the recapture rule is avoided.
Office Action of 04/02/2002, p. 3.

However, the Examiner concluded that Pannu simply precluded allowance of claims without the “virtual device driver” limitation, stating:

However, the Federal Circuit in *Pannu v. Storz Instruments, Inc.*, 59 USPQ2d 1597 (Fed. Cir. 2001) addressed a similar situation in which the limitation that was added during the prosecution of the original patent to make the claims allowable was omitted in the new reissue claims but those reissue claims also contained further limitations which Pannu argued narrowed the scope of the claims in a way related to what was surrendered. The court

concluded that on reissue, Pannu was estopped from attempting to recapture the precise limitation he added to overcome the prior art rejections.

While it is true that based on the facts of Pannu, it was found that the claim was not materially narrowed, no blanket statement precluding the omission of added language was given. Rather, the Federal Circuit was forced to engage in an analysis of the allegedly narrowed claims in that case. The Court examined whether the newly introduced limitation was material. The Court did not simply dismiss Pannu's argument because the added-in-prosecution language was now missing from the reissue claim.

In fact, such a blanket statement was not given because it would be directly contrary to other established precedent. In Ball, the court stated:

The 1952 revision of the patent laws made no substantive change in the definition of error under section 251. While deliberate cancellation of a claim cannot ordinarily be considered error, the CCPA has repeatedly held that the deliberate cancellation of claims may constitute error, if it occurs without deceptive intent. In *In re Petrow*, the CCPA went so far as to state that error is sufficient where the deliberate cancellation of claims does not amount to an admission that the reissue claims were not patentable at the time the original claims were canceled. Similarly, in *In re Wesseler*, the CCPA stated that error is established where there is no evidence that the appellant intentionally omitted or abandoned the claimed subject matter. Thus, the CCPA has construed the term error under section 251 broadly. Ball, 729 F.2d 1429, 1435-1436 (footnotes omitted) (underlining added).

In fact, the Federal Circuit specifically eschewed a stricter standard and adopted the liberal standard of the CCPA. The Ninth Circuit had previously applied a standard substantially the same as that which the Examiner is attempting to apply to the present case. Namely, the Ninth Circuit once used a standard that precluded removing by reissue a "chief element" added in seeking the original patent. The Federal Circuit flatly rejected this standard.

The Ninth Circuit employed a more rigid standard in *Riley v. Broadway-Hale Stores, Inc.* stating: "when the chief element added by reissue has been abandoned while seeking the original patent, the reissue is void." The trial judge sought to determine whether Ball had made a deliberate judgment that claims of substantially the same scope as the new reissue claims would have been unpatentable. The Government, arguing from *Riley*, submits that the trial judge's approach loses sight of the feature given up by a patentee in order to secure the original patent. We decline to adopt the rigid standard applied in *Riley*, in favor of the more

liberal approach taken by the CCPA. *Petrow* clearly establishes the vitality of the standard employed by the trial judge under this court's precedent. Ball, 729 F.2d 1429, 1436.

Ball clarified that the permissible scope of the claims necessarily depended on the facts of a particular case.

In *Willingham*, the CCPA reversed the rejection of a claim that was narrower than the canceled claim as to one element, although broader as to another element. "The extent to which [deliberate cancellation of a claim from the original application] may also prevent [a patentee] from obtaining other claims differing in form or substance from that cancelled necessarily depends upon the facts in each case and particularly on the reasons for the cancellation." *Willingham*, 282 F.2d at 357, 127 USPQ at 215. Ball, 729 F.2d 1429, 1438.

Thus, appellant contends that current law does not prevent the applicant from removing language added in prosecution and modifying the scope of the claim in a manner pertinent to that amendment. This is exactly what occurred in Ball. In Ball, an added-in-prosecution limitation was removed by reissue, even despite the fact that this limitation was added after a suggestion by the examiner as a way to obtain allowance. Ball, 729 F.2d 1429, 1342. Current law dictates that the permissibility of broadening a claim in an aspect related to surrendered subject matter hinges on whether the newly added limitations are materially limiting.

Accordingly, to the extent the Examiner and/or the MPEP contend that the addition of an element in prosecution bars its removal, appellant submits that they are wrong.

2. Did, applicant “surrender” any and all subject matter that lacks the “virtual device driver” limitation?

From the above discussion, it is apparent that the mere canceling of a claim effects a surrender of only the subject matter of the surrendered claim. To be clear, that means the applicant is estopped from pursuing a claim that has the same scope as the canceled claim. No further estoppel flows from the mere claim cancellation. In some cases, it has been argued, largely unsuccessfully, that the patentee is estopped from obtaining a different scope of claim **if** the prosecution history **amounts to an admission** that a particular claim scope is not patentable or that a particular claim element is required for patentability. Here, appellant neither explicitly nor effectively made any admission which would preclude appellant from obtaining the presently proposed reissue claims.

The recapture rule does not apply in the absence of evidence that the applicant’s amendment was an admission that the scope of the claim sought was not in fact patentable. See, Clement, 131 F.3d 1464, 1469 (citing Seattle Box Co. v. Industrial Crating & Packing, Inc., 731 F.2d 818, 826, (Fed. Cir. 1984)). If the applicant admitted something was unpatentable, then it cannot be said to be an “error” correctable under the reissue statute. It follows that the recapture doctrine can not apply to bar a reissue unless the applicant admitted the scope of that claim is not patentable.

Such an admission can occur by (1) amending a claim; or (2) making statements that amount to an admission that a claim is unpatentable. In the first case, if an applicant

amends a claim, the applicant is tacitly admitting that they do not believe that the claim is patentable as it stands. An amendment of a claim is equivalent to a cancellation of the claim and replacement with another claim of narrower subject matter. Clement, 131 F.3d 1464, 1469 (“Amending a claim “by the inclusion of an additional limitation [has] exactly the same effect as if the claim as originally presented had been canceled and replaced by a new claim including that limitation.” In re Byers, 230 F.2d 451, 455, (CCPA 1956).). Either approach results in the **original** subject matter being surrendered by the applicant.

Applicant’s amendments in the prosecution history of the ‘342 Patent surrender the original claim 11 as filed. Applicant added the limitation “virtual” to make the “device driver” a “virtual device driver” in claim 11. This surrender of subject matter is clear. Applicant is not trying to recapture this surrendered subject matter. None of applicant’s reissue claims are equivalent in scope to original and surrendered claim 11. Thus, applicant is not trying to recapture anything that applicant may have effectively admitted is unpatentable by way of a narrowing amendment.

Moreover, applicant contends that applicant did not make any further admissions by argument. Applicant’s statements in the prosecution history of the ‘342 Patent simply do not constitute an admission that the subject matter of that patent was only allowable if the virtual device driver limitation was added. Clearly, adding the virtual device driver limitation to each claim was one manner to overcome the prior art. It was also a way to overcome a § 112, second paragraph rejection. However, applicant did not admit that such an addition was the only way to overcome the prior art. In fact, applicant in essence merely agreed with the Examiner’s conclusion that the prior art did not include the virtual device driver. The Examiner first brought up this point by allowing claim 1 and

suggesting the addition of the “virtual device driver” as a way to obtain allowance. Office Action mailed 1/26/96, p. 6 (“Independent claim 1 is similar to claim 11, except that it specifies the use of *virtual* device drivers to provide power control over devices, instead of using the normal devices drivers of claim 11. As virtual device drivers have no permanent tie to specific hardware, their use in controlling power to specific hardware is considered a novel departure from normal methods of power control.”) (emphasis in original). Such an acquiescence and a later reminder that this aspect distinguishes the prior art simply does not amount to an admission that the “virtual device driver” limitation is a necessary precondition to patentability.

In contrast, in Hester, the Court found that the applicant’s **arguments** effectively were an admission that the applicant’s claims were not patentable without the argued features. That is not the case here. In Hester, both the District Court and Federal Circuit expressed “discomfort” with the applicant’s attempts to remove “solely with steam” and “two sources of steam” limitations that were heavily relied on to obtain allowance of the original patent claims in view of the prior art. In Hester, the inventor Williams, through his attorney, first distinguished a specific prior art reference as not cooking solely with steam or having two sources of steam. As the Examiner continued to reject the claims, Williams repeatedly and emphatically argued these limitations and placed even greater reliance on the “solely with steam” and “two sources of steam” limitations in both of his appeal briefs (two different appeals were filed). The Board of Patent Appeals and Interferences (“Board”) agreed with Williams and cited both the use of steam as the sole cooking medium and the two sources of steam as distinguishing characteristics over the prior art.

Appellant by no means placed such heavy reliance on the virtual device driver limitation. Appellant at most agreed with the Examiner that this limitation let to the various patentable combinations now claimed. To not pursue other claims without this limitation was an error within the meaning of 35 USC § 251.

Thus, the Examiner misconstrues what applicant surrendered in the prosecution of the '342 patent. The Examiner repeatedly compares the newly proposed reissue claims to the issued claims containing the "virtual device driver" limitation, not to the claims applicant gave up. The proper inquiry is a comparison of the scope of the proposed reissue claims to the original claims. It is the original claims that were surrendered. Appellants statements and actions in the prosecution history surrendered no more.

3. Does the recapture doctrine bar the claims of Group I (51, 57, 86, 87, 89)?

As discussed above, the standard for whether claims are permissible in a reissue is whether they differ materially from the surrendered subject matter.⁷ As also discussed above, appellant contends that claim 11 as originally filed in the '342 patent constitutes the surrendered subject matter.

Claim 51, representative of Group I claims is presented below in Table 1.

Claim 51	Original Claim 11
51. (Twice Amended) An article comprising: a machine readable storage medium storing instructions comprising a device manager and power management software, said power management software, if executed by a system, performs operations comprising said power management software: cooperates with said device manager to allow power management of a plurality of devices in the system which are configurable devices; and manages a power level for each of the plurality of devices in the system and is capable of placing one or more of said plurality of devices in a reduced power consumption state.	11. A computer system comprising: a bus; a central processing unit (CPU) coupled to the bus running an operating system and at least one power-unaware application, wherein the operating system has a device driver performing device idle detection using one or more events timers indicating the activity level of at least one local device, and further wherein the device driver places idle local devices in a reduced power consumption state when associated events timers indicate that no activity has occurred for a predetermined period of time transparent to said at least one power-unaware application.

Claim 51 unquestionably does claim subject matter of a different scope than did original claim 11. There are numerous differences in language, as is readily apparent

⁷ Some cases have considered the relevance of the added limitation to the prior art or the prior art rejection, or analyze the relationship between the narrowing and broadening of a particular limitation originally added in prosecution. This analysis is useful and even "important" in some cases. See, e.g., Clement, 131 F.23d 1464, 1470. ("In both Mentor and Ball, the relevance of the prior art rejection to the aspects narrowed in the reissue claim was an important factor in our analysis"). However, the underlying inquiry is whether the claims differ in a material respect, and the other inquiries are inapplicable and/or confusing in other cases. See Appellant's Argument with respect to issue 14, below. The materiality is defined by the sufficiency of

upon only a cursory examination.

The differences are also more than superficial, and indeed are quite material. More particularly, the ways in which claim 51 is narrower than claim 11 are material. A “virtual device driver” does not inherently provide the ability to power manage configurable devices. A device driver could perform the power management claimed in claim 11 for non-configurable devices without code to achieve power management for configurable devices. In other words, surrendered claim 11 does not explicitly or inherently recite any configuration management facilities. Neither a device driver nor even a virtual device driver is necessarily set up to handle varying configurations or configurable devices. Each device could have a fixed mapping or various features set by BIOS, firmware, or in a specific memory or register location. If each device had such a fixed mapping or feature set, as was common in the prior art, the device driver would not need to handle configurable devices at all.

Therefore, specifying that the software is capable of performing power management for configurable devices is a significant limitation. The limitation is materially narrowing in that it requires configuration management capabilities not inherently present by the mere recitation of the term device driver.

Furthermore, in the context of the prior art, the limiting effect of configurability is extremely relevant and material. This limitation has a direct bearing on the then-proffered prior art rejection of claim 11, and is particularly germane and related to that rejection. As stated by the Examiner, Smith taught a computer system in which the device drivers monitor for an idle condition and power down the various devices when

the limitation to overcome the references of record in the case. To the extent some of the other tests seem

such a condition is detected. Office Action of 1/26/96, p. 3 (Citing Smith, Col. 9, lns 50-59). The Examiner was apparently concerned that applicant's original claim 11 would read on Smith's device drivers described in this passage.

It is to be noted that the various drivers of computer 10 are responsible for powering on and off their respective peripheral devices. It is to be noted that drivers of computer 10 can be hardware or software drivers, or a combination thereof, and the preferred embodiment uses software drivers. That is, **software is used to control the powering on and off the respective devices**. Thus, the power to the disk control unit 20 also powers the floppy disk, the power to the parallel communications controller 23 also powers its associated peripheral device, such as the hard disk. The drivers of the serial communications controller 21 and the power to the sound drivers 24 also are controlled as needed. **These drivers are responsible for maintaining the time that these devices are powered to a minimum in order to conserve power. Thus, they are only activated when a given particular device is needed. Generally, each device driver will enable its peripheral device when the driver is needed.**

Smith, Col. 9, lns. 50-67.

Because Smith did not indicate that a "timer" could be used, the Examiner also cited Stewart's use of timers to round out a § 103 rejection.

Thus, the Examiner fairly presented an argument that the prior art included device drivers which place idle local devices in a reduced power consumption state when associated event timers indicate that no activity has occurred for a predetermined amount of time. The Examiner latched on to the fact that the traditional device driver is closely tied to a particular hardware device, hence its name of device driver.

The Examiner pointed out this very fact in explaining the allowability of claim 1.

The Examiner stated:

The following is an Examiner's statement of reasons for the indication of allowable subject matter: Independent claim 1 is similar to claim 11, except that it specifies the use of virtual device drivers to provide power control over devices, instead of using the normal device drivers of claim 11. As virtual device drivers have no permanent tie to specific hardware, their use in controlling power to specific hardware is considered a novel departure from normal methods of power control.

Office Action of 1/26/96, p. 6.

appropriate to particular limitations, appellant explains how the test elements are met.

Therefore, the direct and permanent tie to specific hardware devices was extremely relevant to the initial prior art rejection. Indeed, the difficulty presented by such direct ties was a recognized and difficult-to-solve problem in the art. For example, the Stewart patent, cited by the Examiner, explains that newer operating systems, which have a protected mode, often substitute in their own BIOS and therefore would not use the traditional DOS-based power management software routines.

In general, power management systems use interrupts to communicate to the central processing unit (CPU) of the PC that certain I/O devices should be powered down. The control logic necessary to implement the power management functions is accessed through the ROM basic input/output system (BIOS) software. For example, U.S. Pat. No. 4,980,836 to Carter discloses a power management system in which the activity of certain I/O devices is monitored and timers associated each device are reset each time the corresponding device is accessed. When a device has remained inactive for a predetermined interval of time, a non-maskable interrupt (NMI) is sent by power management circuitry to the CPU. Upon receiving the NMI, the CPU stops processing and executes the interrupt service code, i.e. places the device in its low power consumption state. The CPU then resumes processing from the point at which the interrupt occurred.

While the Carter system is functional in a DOS environment, it is not compatible and will not operate with protected mode operating systems and applications, such as Microsoft Windows, Unix and OS/2. Carter stores its power management control logic in ROM-BIOS, which is inherently limited to a 16-bit "real mode" operation and cannot operate in the 32-bit "protected mode" available with the Intel 80286 and more advanced 80X86 microprocessors. Protected mode operating systems and applications bypass the ROM-BIOS software, substituting their own BIOS therefor. **As a result, hardware specific power management functions that are inserted into ROM-BIOS are lost when protected mode operating systems and applications are implemented.**

Further, and perhaps more importantly, while a NMI is not problematic within a DOS environment, in a Windows environment, a NMI signals a fatal parity error, causing further input and output to be inhibited. For this reason, the power management system of Carter and those similar to it must be disabled prior to executing protected mode programs. Clearly, this result is unsatisfactory, especially in view of the growing popularity of Windows and Windows-based applications.

Stewart, Col. 1, ln. 49 – Col. 2, ln. 23 (emphasis added). Stewart also highlights that other power management techniques were flawed due to the permanent ties to specific hardware.

Other power management systems have been developed which are compatible with Windows and other protected mode programs. These systems use an interrupt other than a NMI, such as interrupt 15H (INT 15H). These systems are also deficient in that the use of INT 15H is not

exclusive, making it impossible to determine whether the interrupt code which is ultimately executed is that of the power management system or of another applications program. **Moreover, special device drivers and interrupt service code specific to the particular hardware and operating system version must be inserted into the program in order to implement power management functions.** As a result, these systems must be designed specifically for and may be implemented only with a particular combination of hardware and operating system software.

Stewart, Col. 2, lns. 24-40 (emphasis added). Stewart's solution to these problems was "BIOS independent power management," which added a dedicated power management microcontroller to monitor activity of various I/O devices. See, e.g., Stewart, Abstract. This results in power management being performed transparently to the CPU. See, e.g., Stewart, Col. 3, lns. 1-2.

Thus, Stewart validates the Examiner's concern about prior art dedicated device drivers. Particularly, Stewart discusses prior art device drivers and software that handled power management for statically mapped devices. Moreover, Stewart highlights the problem that, while power managing statically mapped devices was known in the prior art, power managing configurable devices was a difficult problem. Furthermore, power managing configurable devices in a protected-mode operating system environment was an even more vexing problem.

Stewart chose to address this problem by keeping the power management activity transparent to the operating system. This approach is understandable as the corporate assignee of the Stewart patent is a computer manufacturer, not a software developer. Also, the difficulty of getting cooperation from an operating system vendor is a well known issue in the computer community. Nonetheless, applicant chose a different approach, as described in the '342 patent. This technique addressed a very significant problem at the time- how to power manage devices in an era of growing operating system sophistication and decreasing usage of fixed device driver mappings.

Appellant's background section also addresses many of these problems. Appellant discussed the common usage of dedicated hardware techniques as well as the fact that many implementations "hardcode" I/O addresses, making remapping very difficult. '342 Patent, Col. 2, Ins. 54 - 64. Appellant highlighted that the prior art failed to address these issues.

In a plug-and-play environment, it is assumed that the I/O device resource mappings (I/O and IRQx) are no longer deterministic or visible to the power management software at system boot-up time. Current and future generations of operating systems will be based on plug-and-play architectures, where the I/O resource mapping can and will change dynamically during the lifetime of the current system boot. When these dynamic remappings of I/O devices do occur, there is currently no easy way to communicate to the power management hardware and software.

'342 Patent, Col. 3, Ins. 14-24.

Thus, appellant submits that the prior art rejection and the landscape presented by the relevant art at the time, clearly signals that the ability for software to power manage configurable devices was not only a material departure from the prior art, but also was quite germane to the prior art at hand.

Finally, appellant notes that the Examiner in this case never objected to or rejected any claims reciting limitations that require the power managed devices to be configurable. Instead, claim 35, which recites "examining its data structures to adapt itself to the remapped system resources" was never rejected at all. Thus, the original prosecution posed no opposition to "configurability" being a distinguishing and by itself patentable feature. Furthermore, the Examiner, in the proceedings of this reissue application has not levied any additional prior art rejections.

In response to applicant's reissue claims, the current Examiner argued in conclusory fashion that applicant narrowed claim 51 "in an aspect not material to the prior art rejection." It is unclear to applicant why adding applicant's "configurability"

limitation was not material to the prior art rejection. The inquiry into what is “related to” the prior art rejection is somewhat amorphous in this case, or at least the Examiner’s interpretation is not explained at all.

The only relationship **necessary** between an amendment in a reissue case and a prior art rejection is that the amendment overcome the prior art rejection. Mentor got this right. Pannu confuses the issue and suggests an unclear but also unnecessary inquiry. Clement stated only that the nexus between the prior art rejection and the claim limitations was a “import factor”.⁸ In fact, the Clement court found that the Mentor and Ball cases fell into various categories. However, these are only categories that assist in the analysis as to whether a material narrowing of the claim occurred. Applicant believes that the exercise in establishing a relationship between a particular amendment and a prior art rejection is in some cases an exercise in futility, arbitrariness, and caprice. Insisting on such a relationship obscures the law and is clearly contrary to the liberal construction the reissue statute deserves.

Appellant believes that no nexus to the any prior art rejection necessarily needs to be shown to overcome a recapture rejection. To the extent that any such nexus may be needed, appellant respectfully submits that this connection has been shown. Therefore, applicant submits that the “configurable” limitation materially narrows the claims over the claims from the Original Application and therefore removes the reissue claims from prohibition of the recapture doctrine.

4. Does the recapture doctrine bar the claims of Group II (52, 53, 54, 61)?

Group II claims generally include the “configurability” limitation discussed with respect to Group I claims because all of the Group II claims depend on Claim 51. Thus, to the extent that Group I claims escape the recapture doctrine, Group II claims do as well.

Group II claims, however, can stand on their own. Group II claims also recite various limitations relating to the software operating at or as a part of a kernel level of the operating system and/or in an operating system cooperative manner. Claim 61 further specifies that the operating system can provide virtual memory organization and multitasking operation.

Again, applicant maintains that these claim limitations represent a material narrowing with regard to the prior art rejection set forth by the Examiner. As discussed above, the other prior art included isolated device drivers that did not operate in a cooperative manner with the operating system in order to manage power. Moreover, the prior art such as Smith and Stewart suggested using hardware such as a microcontroller to manage power in a manner that avoids interaction with or is transparent to the operating system.

Furthermore, the fact that the operating system has a “kernel” level implies that the operating system supports privileged mode operations. This is precisely one of the reasons that prior art solutions were inadequate to achieve power management, as discussed in the background of Stewart discussing the Carter Patent, 4,980,836. Stewart, Col. 1, ln. 66 – Col. 2, ln. 13. In particular, prior DOS mode drivers became inadequate because advanced operating systems prevented them from operating as they were

⁸ “In both Mentor and Ball, the relevance of the prior art rejection to the aspects narrowed in the reissue

originally intended.

Finally, the limitations relating to the kernel and cooperating with the operating system relate directly to the virtual device driver limitation because they are some of the characteristics of the virtual device driver described in the '342 Patent. Thus, Group II claims provide a materially limiting element. This element is related to the prior art and the prior art rejection, and is narrowing related to the broadening in the reissue claims.

5. Does the recapture doctrine bar the claims of Group III (58, 88, 90, 91)?

Group III claims generally include the “configurability” limitation discussed with respect to Group I claims because all of the Group III claims depend on claim 51 or claim 86. Thus, to the extent that Group I claims escape the recapture doctrine, Group III claims do as well.

Furthermore, Group III claims include the limitation that the power manager provides “system level power management including the use of multiple system level power management states for said system, and providing multiple power management states for said plurality of devices” (claim 58), or that a processor and an I/O device are power managed (claim 88 and its dependent claims 90-91). In contrast, appellant’s original claims only refer to device level power management states and do not claim overall system level power management states. There is a material difference between power managing a system on a device-by-device basis v. a system level basis because the system-level scheme may impact devices with different activity levels and different power or interface requirements. Moreover, a system-level scheme may delay or

claim was an important factor in our analysis.” Clement, 131 F.3d 1464, 1470.

accelerate powering down certain devices based on other devices' activities.

This limitation is material to the prior art and the prior art rejection because prior art device drivers dedicated to a particular device were just that, dedicated to the particular device. Therefore, such device drives did not operate at a system level and control multiple devices, particularly not a processor and an I/O or other device.

6. Does the recapture doctrine bar the claims of Group IV (63)?

Group IV claims generally include the "configurability" limitation discussed with respect to Group I claims because all of the Group IV claims depend on Claim 51. Thus, to the extent that Group I claims escape the recapture doctrine, Group IV claims do as well.

Furthermore, Group IV claims include the limitation that the power management software "lacks a permanent tie to a specific hardware device in the system". Applicant remains surprised that this claim stands rejected. This claim now claims precisely that which the Original Examiner indicated distinguished applicant's then-presented claims over the prior art. See, Office Action of 1/26/96, p. 6; Office Action of 7/30/96, p. 4. How can this possibly be recapture? That this claim is subject to controversy is a direct reflection of the confusing precedent on the subject of recapture.

Applicant does not see how it is possible to provide such a clearly material narrowing. The narrowing is material because the examiner indicated that this limitation did distinguish over the prior art. Clearly a limitation that distinguishes over the prior art must be material. What else could more clearly indicate materiality? Moreover, this limitation is directly relevant, germane, etc., to the prior art rejection. This limitation

overcomes the prior art rejection. Furthermore, this limitation represents a narrowing in a manner directly pertinent to the broadened limitation. Although the term virtual device driver may not be interchangeable with the phrase in claim 63, it is clear that the lack of permanent ties to a specific hardware device was a feature of the virtual device driver that the Original Examiner considered important.

Thus, applicant submits claim 63 escapes recapture under any possible reading of the applicable precedent.

7. Does the recapture doctrine bar the claims of Group V (56, 64, 65, 66, 67, 68, 80, 81, 82, 83, 94)?

Group V claims generally include the “configurability” limitation discussed with respect to Group I claims because the presence of at least one configurable device may be considered inherent in Group V claims for the purposes of this appeal. Thus, to the extent that Group I claims escape the recapture doctrine, Group V claims do as well.

Additionally, Group V claims recite various limitations regarding communication with a manager regarding configuration issues. For example, claim 56 recites that the power management software “registers with said device manager to be notified of configuration changes”. Similarly (for the purposes of this appeal), claim 64 recites that the power management software “registers with a configuration manager to be notified of configuration changes for any of said plurality of devices”.

Registration with a manager to be informed of configuration changes provides a material limitation to the scope of applicant’s reissue claims not present in surrendered original claim 11 because original claim 11 did not at all concern itself with whether a

device had a fixed or changeable configuration. As argued with respect to Group I, there is a material difference in that the subject matter of Group V claims requires the ability to support a configurable device.

In addition to this previously discussed issue, Group V claims further specify details of a technique by which a configurable device may be power managed. In particular, the power management software may register with a management entity (e.g., a power manager, configuration manager, etc.). The management entity may inform the power management software of configuration changes.

This difference is clearly narrowing with respect to the original claim 11 because not only is original claim 11 non-specific as to whether devices are configurable, but also original claim 11 is non-specific as to how any configurable devices should be tracked.

This difference is an important and material distinction with respect to the presented prior art because the prior art suggested either that power management software be self-contained (e.g., in a dedicated device driver) or managed by a microcontroller.

8. Does the recapture doctrine bar the claims of Group VI (55, 59, 60, 85)?

Group VI claims generally include the “configurability” limitation discussed with respect to Group I. Additionally, Group VI claims generally include the “configuration communications” limitation of group V. Thus, to the extent that Group I and/or Group V claims escape the recapture doctrine, Group VI claims do as well.

Furthermore, Group VI claims recite kernel related limitations similar to those of Group II. Thus, for the same reasons that Group II may stand on its own, so may Group VI. However, Group VI is enumerated separately because it may stand based on Group V

limitations, whereas Group II claims also stand only on the basis of Group I claims. In other words, Group VI claims have a different dependency chain.

9. Does the recapture doctrine bar the claims of Group VII (69, 84)?

Group VII claims generally include the “configurability” limitation discussed with respect to Group I. Additionally, Group VII claims generally include the “configuration communications” limitation of group V. Thus, to the extent that Group I and/or Group V claims escape the recapture doctrine, Group VII claims do as well.

Furthermore, Group VII claims recite that a configuration update occurs in the same manner as during a boot. The use of the same technique to update the data structures as is done at boot time is a material narrowing because it would be possible to attempt to only update a subset of the entries in data structures after boot time. This aspect is materially limiting because the technique used to update the data structure must be substantially the same as at boot-up time. Original claim 11 does not speak to dealing with configurable devices, much less updating data structures associated with these devices.

Adding this limitation is relevant to the prior art and the prior art rejection for the same reasons as Group I and Group V claims.

10. Does the recapture doctrine bar the claims of Group VIII (70, 71, 72, 79)?

Group VIII claims generally include the “configurability” limitation discussed with respect to Group I. Additionally, Group VIII claims generally include the “configuration communications” limitation of group V and the “kernel level” limitation

limitation of Group VI for the purposes of this appeal. Thus, to the extent that Group I, Group V, and/or Group VI claims escape the recapture doctrine, Group VIII claims do as well.

Furthermore, Group VIII claims include system level limitations similar for the purposes of this appeal to Group III. Thus, for the same reasons discussed above with respect to Group III, Group VIII may stand. Group VIII, like Group VI, is enumerated separately for having a different dependency chain.

11. Does the recapture doctrine bar the claims of Group IX (74, 75, 76, 77, 78)?

Group IX claims generally include the “configurability” limitation discussed with respect to Group I. Additionally, Group IX claims generally include the “configuration communications” limitation of group V. Thus, to the extent that Group I and/or Group V claims escape the recapture doctrine, Group IX claims do as well.

Furthermore, Group IX claims include system level limitations similar for the purposes of this appeal to Group III. Thus, for the same reasons discussed above with respect to Group III, Group IX may stand. Group IX, like Group VIII, is enumerated separately for having a different dependency chain.

12. Does the recapture doctrine bar the claims of Group X (92, 93)?

Group X claims generally include the “configurability” limitation discussed with respect to Group I. Additionally, Group X claims generally include the “kernel level” limitation of group II. Thus, to the extent that Group I and/or Group II claims escape the recapture doctrine, Group X claims do as well.

Furthermore, Group X claims include system level limitations similar for the purposes of this appeal to Group III. Thus, for the same reasons discussed above with respect to Group III, Group X may stand. Group X, like Group VIII, is enumerated separately for having a different dependency chain.

13. Does the recapture doctrine bar the claims of Group XI (73)?

Group XI claims generally include the limitations discussed with respect to Group X claims for the purposes of this appeal. Thus, to the extent that Group X claims escape the recapture doctrine, Group XI claims do as well.

Furthermore, Group XI claims contain limitations that idle times can be varied by settings that a user can adjust via a graphical user interface (GUI). The use of a graphical user interface to vary idle times is a material limitation because it requires the idle times to be variable via a GUI. This precludes this claim from covering a technique in which the idle times are only variable by other means, such as hardwiring, text editing, non-GUI-based BIOS reprogramming, etc. These are significant and material approaches that are eliminated from the scope of this claim. Original claim 11 specifies nothing about how idle timers might be adjusted.

14. Is the Judicially Created Recapture Doctrine inherently and irreconcilably inconsistent with the Reissue Statute, 35 USC § 251, which permits broadening of claims, and now devoid of its original purpose of ensuring comity to the prosecution-history-reading public?

A. The Recapture Doctrine is Inconsistent with the Purpose of Broadening

Reissue Practice

A broadening reissue application was first upheld as valid in Battin v. Taggart, 58 U.S. 74 (S.Ct., 1854). Battin's original patent covered the combination of a coal breaking roller and a screen, whereas the broadening reissue claimed the breaking roller alone. The Court in Battin explained that a patentee had a "right to restrict or enlarge his claim, so as to give it validity and to effectuate his invention." See, Chisum on Patents, §15.01.

The holding of Battin served to further refine the requirements under §3 of the Patent Act of 1832, which allowed a patentee to apply for a reissue if the original patent is invalid or inoperative due to "inadvertence, accident, or mistake, and without any fraudulent or deceptive intention" on the part of the inventor. 1832 Patent Act, § 3.

The holding of Battin was upheld and further refined in Topliff v. Topliff, 145 U.S. 156 (S.Ct., 1892), in which the U.S. Supreme Court upheld the present limitation of **two years** from the filing date of the original patent to obtain a broadening reissue. In Topliff, Justice Bradley reiterated the import of the underlying policy announced in Battin in awarding a broadening reissue to a patentee who failed to claim the full scope of his invention without deceptive intent:

The object of the patent law is to secure to inventors a monopoly of what they have actually invented or discovered, and it ought not to be defeated by a too strict and technical adherence to the letter of the statute, or by the application of artificial rules of interpretation.
Topliff, 145 US 156, 171.

The extent to which a patentee may correct his failure to claim all that he has disclosed in the patent was limited by Leggett v. Avery, 101 US 56 (1879), to that which

the patentee had not voluntarily surrendered during the course of prosecution of the original patent. Specifically, the patentee in Leggett had cancelled all but one claim in a reissue application at the request of the examiner in order to secure a term extension. The patentee subsequently re-applied for a term extension on the earlier abandoned claims. Because the claims were abandoned in order to secure the reissue extension, the Court explained, the patentee was estopped from subsequently reclaiming them. Leggett became the basis for what became known as the “recapture doctrine”.

Recapture of surrendered matter by canceling claim limitations added during prosecution of the original patent was held to be permissible under certain situations, “but not at the expense of innocent parties”, the Court announced in Sontag Chain Stores v. National Nut Co., 310 U.S. 281 (1940). Accordingly, the Court in Sontag imposed a limitation on what should be considered “inadvertence, accident, or mistake” to that which was not surrendered during the prosecution of the original patent in order to secure the patent.

The court-made exception to the broadening reissue statute was not contemplated by earlier statutes and was directly in conflict with the purpose of broadening reissue practice announced in Battin and Topliff.

B. The Recapture Doctrine is Counter to the Legislative Intent in Enacting 35 USC §251

In 1952 the requirement of “inadvertence, accident, or mistake” was removed from the reissue statute and replaced by “error without deceptive intention” in 35 USC §251 (the ’52 Act). Although the legislative history is silent as to the explicit meaning of

the term “error” in the statute, the court in Ball Corp. v. U.S., 729 F.2d 1429 (Fed. Cir., 1984), observed that the 1952 revision of the patent laws made no substantive change in the definition of error under section 251. There is no evidence in the legislative history, however, that the legislature intended the recapture doctrine to survive in the definition of “error”. Indeed, 35 USC §251 makes no mention of the recapture doctrine despite the fact that the recapture doctrine was a mature, commonly used doctrine in the courts at the time §251 was enacted.

If the recapture doctrine existed at the time 35 USC §251 was enacted, and the doctrine was considered by the legislature to be a favorable and important supplement to the practice of patent reissuance, it would not be unreasonable to expect the legislature to at least mention the recapture doctrine in the language of the statute. Indeed, the absence of any reference to the recapture doctrine in 35 USC §251 coupled with the legislature’s replacement of “inadvertence, accident, or mistake” with a broader requirement of “error without deceptive intention”, would lead one to believe that the recapture doctrine was not intended to survive in patent law jurisprudence after the enactment of the statute.

Furthermore, the existence of 35 USC § 252 indicates that Congress did provide protections to the public to the extent Congress deemed appropriate. The intervening rights protections of 35 USC § 252 explicitly provide the safety net for the public that Congress intended in the ’52 Act in the situation of a broadening reissue. To find that other equitable protections exist runs directly contrary to Congress’ explicit provision of intervening rights in 35 USC § 252.

C. Case Law Subsequent to 1952 has Broadened the Scope of the Basis for

Broadening Reissue while Narrowing the Recapture Doctrine

Although the court in Ball believed that §251 did not substantively change the error requirement for broadening reissue applications, patentees since 1952 have been granted greater latitude by the courts as to what may be considered “error” under 35 USC §251, as evidenced by cases, such as In re Richman, 409 F.2d 269 (CCPA, 1969), In re Wesseler, 367 F.2d 838 (CCPA, 1966), In re Willingham, 282 F.2d 353 (CCPA, 1960), which held, among other things, that “error” should be construed liberally and applied the statute accordingly.

For example, in Wesseler, the CCPA relaxed somewhat the strict requirement that the patentee cannot reclaim that which he surrendered to secure the patent under cases, such as Shepard and Sontag, to a requirement that there merely must be no evidence that the appellant intentionally omitted or abandoned the claimed subject matter. Later, in In re Petrow, 402 F.2d 485 (CCPA, 1968), the CCPA further expanded the “error” requirement by stating that the error requirement is satisfied where the deliberate cancellation of claims does not amount to an admission that the reissue claims were not patentable. Furthermore, the recapture doctrine has been said not to apply where there is no evidence that the amendment of originally filed claims was an admission that the scope of the claims were not patentable, Seattle Box Co. v. Industrial Crating & Packing, Inc., 731 F.2d 818, (Fed. Cir. 1984).

The result of case law, such as Wesseler, Petrow, Willingham, and Seattle Box, is an expansion of the basis for which a broadening reissue will be allowed. Specifically, prior to the enactment of 35 USC §251, a patentee could only secure a broadening reissue if the reissue claims did not include matter that was surrendered during the prosecution of the

original patent in order to secure the patent. However, after the enactment of 35 USC §251, the case law, including Wesseler, Petrow, and Seattle Box, indicates that the deliberate cancellation of matter in the original patent does not necessarily bar the patentee from reclaiming that subject matter in a broadening reissue, unless there is evidence the patentee **intentionally surrendered** the subject matter, such that the surrender of the subject matter amounted to an **admission of unpatentability of the scope of a claim sought in reissue.**⁹

The concept of error perhaps reached its zenith in Richman, which addressed the situation of recapturing claim matter in a broadening reissue after amending the claim to add limitations to gain allowance of the claim in the prosecution of the original patent. In Richman, the patentee sought to broaden Claims 23 and 26 by characterizing the relevant control signal value in terms of its condition when a synchronizing signal and a reference signal are in synchronization, instead of the original narrower characterization of the control signal, which relied upon the phase relationship of the generated reference signal and the synchronizing signal.

In response to the examiner's rejection of Richman Claims 23 and 26 on the grounds that the errors to be corrected are not the type contemplated by 35 U.S.C. §251, i.e., not errors arising out of 'inadvertence, accident, or mistake', Judge Rich stated, "The phrase 'inadvertence, accident, or mistake' does not appear in 35 USC §251 but is derived from the patent statutes in force prior to the 1952 Act." Richman, 409 F.2d 269, 273. Furthermore, Judge Rich added, "We pointed out in In re Wesseler, that the term

⁹ These cases make it clear that, at least, the patentee is entitled to pursue claims of different scope, so long as no admission of unpatentability has occurred and so long as claims of the **same** scope are not being pursued in the reissue.

‘error’, as set out in 35 USC §251, ‘is to be interpreted as Congress has stated it, ‘error without any deceptive intention’, and in light of Supreme Court decisions favoring the liberal construction of reissue statutes in order to secure to inventors protection for what they have actually invented.’ ” Richman, 409 F.2d 269, 273.

Judge Rich went on to distinguish the case at bar from Shepard by noticing that the omission of the limitation in Shepard, “would have resulted in the claim being drawn to the same subject matter as the original rejected claim...thus making it unpatentable for the same reason as the original claim.” Richman, 409 F.2d 269, 274. Judge Rich could not, “..therefore, find [Shepard] to be authority for the proposition that a limitation added to a claim in obtaining its allowance cannot be broadened, under present statutory law, by reissue if the limitation turns out to be more restrictive than the prior art required.” Richman, 409 F.2d 269, 275. “Certainly”, Rich expounded, “one might err without deceptive intention in adding a particular limitation where a less specific limitation regarding the same feature, or an added limitation relative to another element, would have been sufficient to render the claims patentable over the prior art.” Richman, 409 F.2d 269, 275. Judge Rich ultimately concluded that the patentee did not intend to settle for less protection than he was entitled merely by acting deliberately in limiting the rejected claim in manner that he later found to be improper for his purposes.

Cases, such as Petrow, Wesseler, and Richman, illustrate the equitable and logical reality that the court-made doctrine prohibiting recapture of surrendered claim subject matter has little place in the post-1952 world, in which patentees must only show “error without deceptive intention” in order to secure a broadening reissue. Indeed, since the ’52 Act was enacted, the courts have progressively and rightfully acknowledged that a

patentee's failure to appreciate the scope of the claims of his original patent is a valid error within the meaning of the statute, In re Wilder, 736 F.2d 1516 (Fed. Cir., 1984), thereby entitling him to claims limited only by the boundaries defined by the prior art.

Just as case law has expanded the basis for obtaining a broadening reissue 35 USC §251, the recapture doctrine has been narrowed, accordingly.

D. Requiring Patentee to Materially Narrow a Claim Containing Recaptured Matter in order to Escape the Recapture Doctrine is Counter to the Intent of the Broadening Reissue Statute

Recent cases have attempted to mask the inconsistencies between 35 USC §251 and the recapture doctrine by requiring the patentee to narrow the scope of a broadening reissue claim in a manner related to what the patentee surrendered during prosecution of the original patent to secure the patent. Similar to the recapture doctrine itself, the “narrowing requirement” has no basis in 35 USC §251, which only requires “error without deceptive intention” as a basis for filing a broadening reissue. Indeed, if the requirement for obtaining a broadening reissue is “error without deceptive intention”¹⁰, and a “failure to appreciate the scope of the invention”¹¹ that results in the patentee “adding a particular limitation where a less specific limitation regarding the same feature, or an added limitation relative to another element, would have been sufficient to render the claims patentable over the prior art”¹², then why should a patentee be compelled to further limit his claim to a scope that is more than what is necessary to overcome prior

¹⁰ 35 USC §251.

¹¹ see generally, Wilder, 736 F.2d 1516.

¹² see generally, Richman, 409 F.2d 269.

art?

The narrowing requirement of the recapture doctrine is not only counter to the statute, but it is inconsistent with the intended purpose of the broadening reissue practice announced in earlier cases, such as Battin and Topliff – that the inventor should be entitled to claim all he has invented.

Contrary to the statements in Ball, Mentor, Hester, Clement, and most recently, Pannu, the narrowing requirement of the recapture doctrine provides little if any protection or predictability to a would-be infringer, because neither the recapture doctrine nor the narrowing requirement necessarily protects the would-be infringer against a patentee pursuing claims containing the recaptured matter. In particular, even though a patent is amended to issue with narrowed claims, the patentee could, and commonly does, file a continuation application to pursue broader claims. The narrowing of the issued claims provide no protection to would-be infringers in this commonplace scenario.

Moreover, the patentee should fear that broadened claims may be obtained by reissue. That is exactly what the statute allows. All members of the public are on notice that a broadening reissue can be filed within two years of the issue date of any US patent. The would-be infringer operating in the two-year broadening reissue window is protected without any equitable recapture doctrine. The intervening rights protections of 35 USC § 252 explicitly provide the safety net that Congress intended in the situation of a broadening reissue. To find that other equitable protections exist runs directly contrary to Congress' explicit provision of intervening rights in 35 USC § 252. Yet, the recapture doctrine persists, hurting patentees and affording a would-be infringer a very narrow and largely theoretical degree of protection from infringement litigation.

Not only is the recapture doctrine and the requirement that a patentee must narrow his claim in a manner that is necessary to overcome prior art in order to avoid the doctrine not consistent with 35 USC §251 and subsequent case law relating to the scope of “error without deceptive intention”, but these requirements, when balanced against the inequities and burden placed on the patentee, afford very little, if any, predictability or protection to a would-be infringer.

E. The Recapture Doctrine is Impractical Due to the Varying Standards for the Narrowing Requirement in Recent Case Law and the Factually-Intensive Analysis that Must be Applied

In Leggett, Justice Bradley stated that the purpose of preventing a patentee from reclaiming in a broadening reissue that which he had surrendered to secure the original patent was to allow the public to rely on what the patentee surrendered to obtain the issued patent. However, as the basis for obtaining a broadening reissue has expanded under cases such as Petrow, Richman, Wesseler, and Wilder, the recapture doctrine has also expanded to require the patentee to narrow the scope of the claim in some particular way in an effort to uphold the principals announced in Leggett.

However, the rules governing the “narrowing requirement” vary from case to case, resulting in confusion among patentees, practitioners, and would-be infringers as to how the recapture doctrine should be applied. Indeed, the recapture doctrine together with the associated narrowing requirement has evolved into a factually-intensive inquiry that neither the Courts nor potential litigants can apply consistently.

For example, in Ball, the patentee had canceled original claims directed to a single

feed means in order to avoid prior art and secure a patent. The patentee then filed reissue claims containing the limitations of an electrical signal feed assembly and a dielectric-filled cavity between the two conductors. The Court allowed the patentee to recapture the broader single feed limitation because with the limitations of the electrical signal feed assembly and the dielectric-filled cavity, the overall scope of the reissue claims were narrowed with respect to the scope of the originally canceled claims. Although the patentee had broadened the reissue claims in a manner related to the elements that were surrendered, the claims were narrowed in scope by the additional limitations overall. Therefore, the court said, patentee had avoided the recapture doctrine.

In Mentor, on the other hand, the patentee sought to recapture in the reissue claims the limitation of transferring adhesive from an outer layer to the inner layer in order to read on a competing product. The patentee included other limitations in the reissue that the Court decided were not “materially limiting” in relation to the feature the patentee surrendered to secure the patent – the transfer of adhesive from an outer layer to an inner layer. Unlike in Ball, the court in Mentor looked to how the claims were limited in relationship to the features surrendered during the prosecution of the original patent rather than the overall scope of the reissue claim in relation to the scope of the original claim. Furthermore, Mentor queried whether the narrowing limitation was “material” to the recaptured matter, whereas Ball mentions no such requirement.

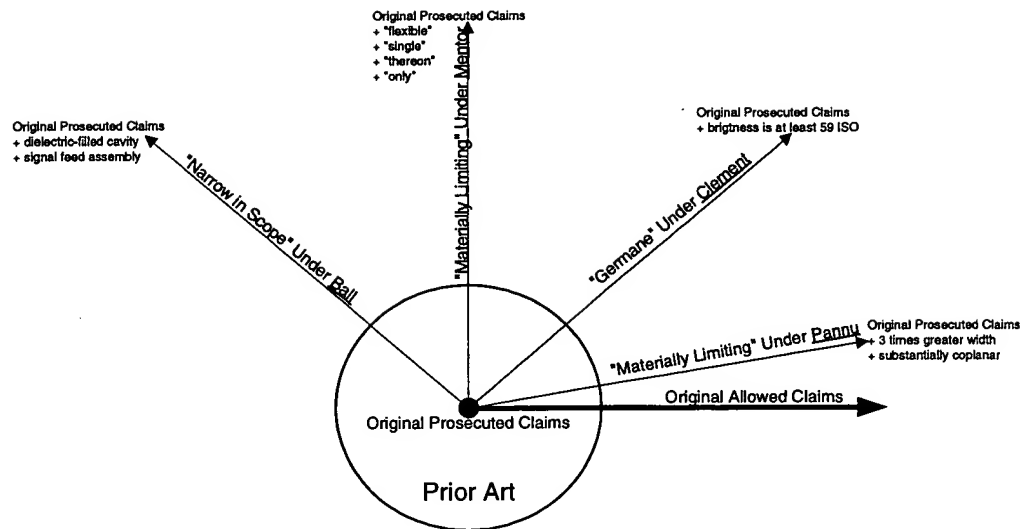
The inquiries surrounding recapture changed once again in Clement, which questions if a limitation added to the reissue claim was “germane” to the surrendered claim matter. Specifically, because the patentee had removed several limitations from the original claims that were added and argued to overcome prior art while adding a

limitation that was not “pertinent to” the removed limitations, the recapture doctrine prevented the patentee from regaining the surrendered subject matter.

More recently, Pannu indicated that the standard of “materially narrowing” may mean something more restrictive than simply “germane” as in Clement or something that merely narrows the overall scope of the claim as in Ball. In Pannu, the court stated that a limitation added to a reissue claim relating to the positioning and dimensions of a lens haptic was not materially related to the limitation relating to the shape of the haptic added during prosecution yet removed in the reissue. The court found that the claims were not “narrow[ed] in any material respected compared with their broadening”. Pannu, 258 F.3d 366, 372. .

Pannu implies that it may no longer be sufficient to merely “limit the scope” of the claim overall or limit the reissue claim that is “pertinent to” the surrendered matter, because the limitation added in the reissue claims in Pannu no doubt limited the overall scope of the claim in a way that was at least pertinent or germane to the configuration of the lens haptic. Pannu argued that being germane to the configuration was sufficient, but the Court cited the lack of a closer nexus than configuration, actually stating that the original added claim limitation was on the shape, and the newly added limitation pertained to the positioning and dimensions.

What remains in wake of Pannu is uncertainty and unpredictability in how to properly limit a reissue claim in a manner that is materially limiting and if there is any necessary relationship to the surrendered matter of the original claim. The diagram below illustrates the gradual restriction of the “material limiting” requirement from the decision in Ball, through Mentor, Clement, and most recently in Pannu.



Great inconsistency exists with regard to what is considered to be a suitable limitation in reissue claims to overcome the recapture doctrine. The center point of the circle represents the original claim that was rejected and subsequently abandoned by the patentee in favor of the original allowed claim (vector to the right). The circle around the original prosecuted claims represents “immaterial” deviations from the originally proposed (and abandoned) claims. The patentee escapes the circle of immaterial differences to get the originally allowed claims allowed. The direction that the patentee chose to escape the circle of immaterial differences is represented by a vector to the right. The recapture doctrine precludes claiming anything including the original prosecuted claim and anything within the circle of immaterial differences thereabout.

In Ball, as long as the claims were narrowed sufficiently to escape the circle of immateriality, it was not essential to move in the direction of the original allowed claims vector, as long as the claim was narrowed overall. Under Mentor, the court inquired as to whether the claims were “narrow[ed] in any material respect compared with their broadening”. Mentor, 998 F.2d 992, 996. This begins to imply a closer relationship to

the direction originally chosen by the patentee to escape the prior art rejection. Similarly, in Clement, the Court inquired as to whether the claims were narrower in an aspect germane to the prior art rejection. Finally, Pannu inquired whether the reissue claims were “narrowed in any material respect compared with their broadening”. Pannu, 258 F.3d 366, 372. These inquiries tend to tie the required reissue limitation closer and closer to the limitation added during prosecution. This trend is simply inconsistent with the precedent that indicates an applicant may act deliberately in adding a claim limitation, but that deliberate act may be an error.

As appellant described above, appellant believes that under current law, all that is required is that the new reissue claims escape the circle of immaterial differences from the original prosecuted claims to avoid recapture. The “germane”, “narrowed in any material respect to their broadening” and “narrowed in any material respect compared with their broadening” inquiries of Clement, Mentor, and Pannu may be useful, but are not controlling.

The result of recent cases, such as Ball, Mentor, Clement, and Pannu, is a doctrine that is at best confusing. Furthermore, if the would-be infringer or his agent is able to determine with any degree of certainty from prosecution history whether the above highly factual inquiry subjects him to infringement liability, he still may be subject to litigation if there are any co-pending continuations of the original patent. Therefore, under the broadening reissue statute, 35 USC §251, the recapture doctrine in its current state fails to provide any real degree of reliance to the public on claims granted to the patentee for the parent/original application.

The recapture doctrine, which was created to prevent a patentee from reclaiming

what he had surrendered during prosecution of the original patent to avoid prior art, is directly at odds and wholly inconsistent with 35 USC §251, which has been interpreted in the last 50 years to allow the correction of deliberate surrender of subject matter to avoid prior art. The restrictions that recent courts have placed on added claim limitations that allow a patentee to avoid the recapture doctrine in order to promote certainty, fairness, and confidence in the minds of would-be infringers has been attenuated, if not eviscerated, by the factually intensive inquiry and inconsistent standards of the current recapture doctrine.

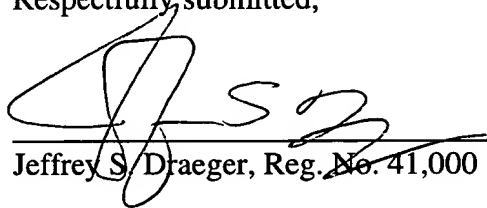
Therefore, the recapture doctrine should be abolished in favor of a consistent application of the broadening reissue law in 35 USC §251, which should be interpreted to allow a patentee to obtain claims in a broadening reissue so long as an error without deceptive intent occurred, and so long as the prior art is not covered by the reissue claims.

Conclusion

Appellant submits that all claims now pending are in condition for allowance. Such action is earnestly solicited at the earliest possible date. If there is a deficiency in fees, please charge our Deposit Acct. No. 02-2666.

Respectfully submitted,

Date: 12/2/2002


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IX. Appendix A: Claims Involved in Appeal (Clean Copy)

51. (Twice Amended) An article comprising:

a machine readable storage medium storing instructions comprising a device manager and power management software, said power management software, if executed by a system, performs operations comprising said power management software: cooperates with said device manager to allow power management of a plurality of devices in the system which are configurable devices; and manages a power level for each of the plurality of devices in the system and is capable of placing one or more of said plurality of devices in a reduced power consumption state.

52. The article of claim 51 wherein said power management software operates at a kernel level of an operating system.

53. The article of claim 52 wherein said device manager comprises a plug and play manager.

54. The article of claim 53 wherein said power management software comprises a power manager that forms a part of a kernel of the operating system.

55. The article of claim 53 wherein said power management software, if executed,

communicates with said plug and play manager to update data structures if configuration changes occur to allow power management of dynamically reconfigurable devices.

56. The article of claim 51 wherein said power management software, if executed, registers with said device manager to be notified of configuration changes.

57. (Once Amended) An article comprising:

a machine readable storage medium storing instructions comprising power management software, said instructions, if executed by a system cause said system to perform operations comprising:

allowing power management of a plurality of devices in the system which are configurable devices; and
managing a power level for each of the plurality of devices in the system, said power management software being capable of placing one or more of said plurality of devices in a reduced power consumption state, wherein said power management software, if executed, provides support for idle detection for at least one of said plurality of devices.

58. The article of claim 51 wherein said power management software comprises a power manager, said power manager, if executed, providing system level power management including the use of multiple system level power management states for said system, and providing multiple power management states for said plurality of

devices.

59. The article of claim 51 wherein said power management software, if executed, provides support for idle detection for at least one of said plurality of devices.

60 The article of claim 55 wherein said power management software, if executed, places the system in a sleep state when the system is idle and keeps said system in said sleep state until activity is detected, and wherein the sleep state is one of a plurality of system power management states, and further wherein said system stops a clock for a system processor in said sleep state.

61. The article of claim 53 wherein said operating system, if executed, provides virtual memory organization and multitasking operation.

62. The article of claim 53 wherein said plurality of devices comprise:

an I/O device that is placed in a first reduced power consumption state by the power management software if the I/O device is inactive for a first period of time; and

a processor that is placed in a second reduced power consumption state by the power management software if the system is idle for a second period of time.

63. (Once Amended) The article of claim 51 wherein said power management software

performs power management for said plurality of devices and lacks a permanent tie to a specific hardware device in the system.

64. (Once Amended) An article comprising:

a machine readable storage medium storing power management software which, if executed by a system, performs operations comprising said power management software:

coordinates power management for a plurality of devices; and

registers with a configuration manager to be notified of configuration changes for any of said plurality of devices.

65. (Amended) The article of claim 64 wherein said power management software comprises a device driver that manages a power state for said plurality of devices.

66. The article of claim 65 wherein said device driver, if executed, in response to a configuration change, examines its data structures to adapt to remapped system resources.

67. The article of claim 65 wherein said configuration manager is a plug and play manager.

68. The article of claim 64 wherein said power management software, if executed, alters data in a data structure in response to a configuration change to allow continued power management of said plurality of devices after said configuration change.

69. (Amended) The article of claim 68 wherein said power management software, if executed, instructs the configuration manager to notify it when there has been the configuration change and wherein said power management software responds to a notification of the configuration change by updating data in said data structure in the same manner as when examining the data structure at system boot-up time.

70. (Once Amended) An article comprising:

a computer readable storage medium storing power management software comprising a power manager and additional software which is operating system software, the power management software, if executed by a computer, performs operations comprising said power management software:

forms a part of a kernel level of an operating system for the computer;

cooperates with a device manager to allow power management of a plurality of system devices after reconfiguration of said plurality of system devices;
and

manages a power level of the computer.

71. The article of claim 70 wherein said power management software, if executed by said computer, provides support for idle detection for at least one of a plurality of devices.

72. The article of claim 71 wherein said power management software provides support for clock throttling of a system processor.

73. (Twice Amended) An article comprising:

a computer readable medium storing a plurality of computer executable instructions including power management software and additional software to implement an operating system, the power management software, if executed by a computer system, operates in an operating system cooperative manner with said operating system at a kernel level which is a highest privilege level of the operating system, and causes the computer system to perform operations comprising:

providing support for device idle detection for an input/output device in said computer system to determine when said input/output device has been inactive for a first duration, the first duration being a user configurable duration that may be varied based on desired power savings using a graphical user interface;

placing said input/output device in a reduced power consumption state if said input/output device has been inactive for the first duration;

cooperating with a plug and play manager that, in cooperation with said power management software, allows power management of said input/output device even though said input/output device is a plug and play configurable device;

providing support for system level power management by monitoring global events;

placing said computer system into one of a plurality of system level power management states as a part of system level power management

implemented by said power management software, one of said plurality of system level power management states being a sleep state into which the computer system is placed due to the system remaining idle.

74. A method comprising:

monitoring, using power management software, a power level of a plurality of devices in a system;
detecting an inactive device;
placing one of said plurality of devices in a reduced power consumption state due to detected inactivity;
performing system level power management using said power management software; and
allowing continued power management of devices after device reconfiguration.

75. The method of claim 74 wherein allowing comprises communicating with a device manager to update data structures if configuration changes occur.

76. The method of claim 75 wherein the device manager comprises a plug and play manager.

77. The method of claim 74 further comprising:

programming a first duration of inactivity required to place one of said plurality of devices in said reduced power consumption state based on

desired power savings.

78. The method of claim 74 wherein performing system level power management comprises:

placing said system in a sleep mode that stops a clock to a system processor until system activity is detected.

79. The method of claim 74 wherein said power management software operates at a kernel level of an operating system for the system and wherein said power management software cooperates with operating system routines in performing system power management.

80. A method comprising:

coordinating power management for a plurality of devices;
registering with a configuration manager to be notified of configuration changes for any of said plurality of devices.

81. (Amended) The method of claim 80 wherein power management software for said plurality of devices controls a power state for said plurality of devices and performs coordinating power management for said plurality of devices and registering with the configuration manager to be notified of configuration changes for any of said plurality of devices.

82. The method of claim 80 wherein said configuration manager is a plug and play manager.

83. The method of claim 80 further comprising:

altering data in a data structure in response to a configuration change to allow continued power management of said plurality of devices after a configuration change.

84. The method of claim 81 further comprising:

instructing the configuration manager to notify the device driver when there has been a configuration change; and
responding to notification by updating data in a data structure in the same manner as when examining the data structure at system boot-up time.

85. (Amended) The method of claim 81 wherein said power management software operates at a kernel level of an operating system and wherein said power management software cooperates with operating system routines in performing power management.

86. (Amended) A system comprising:

a bus;

a plurality of devices coupled to said bus, the plurality of devices being configurable devices, the system being capable of reconfiguring said plurality

of devices;

a memory containing a device manager and power management software which, if executed by the system, cooperates with said device manager to allow power management of said plurality of devices in the system and manages a power level of said plurality of devices.

87. The system of claim 86 wherein the plurality of devices are plug and play configurable devices.

88. The system of claim 86 wherein said plurality of devices comprises:

an I/O device; and

a processor.

89. The system of claim 86 wherein said power management software, if executed, provides support for idle detection said plurality of devices.

90. The system of claim 88 wherein said power management software, if executed, places said I/O device in a reduced power consumption state if said I/O device is inactive for a first duration.

91. The system of claim 90 wherein said power management software, if executed, places said processor in a reduced processor power consumption state if said system is inactive for a second duration.

92. The system of claim 90 wherein the power manager operates at a kernel level of an operating system for the system, and wherein said device manager comprises a plug and play manager.

93. The system of claim 92 wherein said power management software, if executed, communicates with said plug and play manager to update data structures if configuration changes occur to allow power management of dynamically reconfigurable devices.

94. A system comprising:

a device;

a processor;

a memory containing power management software which, if executed by said system

coordinates power management for a plurality of devices; and

registers with a configuration manager to be notified of configuration changes for any of said plurality of devices.

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